## **Amendments to the Claims:**

This listing of claims will replace all prior versions and listings of claims in the application:

## **Listing of the Claims:**

1. (Currently Amended) A method for generating an electronic signal, comprising:

determining an update phase-angle associated with the electronic signal;

computing a first value of a <u>cyclic</u> function based on an interpolation using a first set of data-values that generally describe the function <u>and have a spacing expressed in terms of cycles</u>, the update phase-angle and a second set of pre-calculated-values, wherein the pre-calculated values are based on spacing differences between the data-values; and

updating the electronic signal based on the first value.

2. (Original) The method of claim 1, wherein the step of interpolating is based on a Lagrange technique.

- 3. (Original) The method of claim 1, further wherein the data-values are equally-spaced.
- 4. (Original) The method of claim 3, wherein the pre-calculated values are substantially the same value.
- 5. (Canceled)
- 6. (Currently Amended) The method of claim [5] 1, wherein the function is a sinusoid.
- 7. (Original) The method of claim 6, wherein the data-values are derived from a table of data-values representing less than a cycle of the sinusoid.
- 8. (Original) The method of claim 1, wherein the electronic signal is an analog signal having sinusoidal form.

- 9. (Original) The method of claim 1, further comprising producing a communication signal having embedded information based on the electronic signal.
- 10. (Currently Amended) An apparatus for generating an electronic signal, comprising:

a memory that contains an update phase-angle associated with the electronic signal, a first table of data-values that generally describe a cyclic function and have a spacing expressed in terms of cycles, and a second table of pre-calculated-values, wherein the pre-calculated values are based on spacing differences between the data-values;

one or more devices that compute a first value of the function based on an interpolation using the update phase-angle, the first set of data-values from the first table and the second set of pre-calculated-values from the second table; and

an interface that updates the electronic signal based on the first value.

11. (Original) The apparatus of claim 10, wherein the one or more devices use a Lagrange interpolation technique.

- 12. (Original) The apparatus of claim 11, wherein the data-values are equally-spaced.
- 13. (Original) The apparatus of claim 12, wherein the pre-calculated values are substantially the same value.
- 14. (Canceled)
- 15. (Original) The apparatus of claim 10, wherein the electronic signal is an electronic analog signal having sinusoidal form.
- 16. (Original) The apparatus of claim 10, wherein the electronic signal is used to produce a communication signal having embedded information.
- 17. (Currently Amended) A machine-readable medium including instructions for generating an electronic signal, the instructions being arranged to cause a machine to perform the steps of:

determining an update phase-angle associated with the electronic signal;

computing a first value of a <u>cyclic</u> function based on an interpolation using a first set of data-values that generally describe the function <u>and have a spacing expressed in terms of cycles</u>, the update phase-angle and a second set of pre-calculated-values, wherein the pre-calculated values are based on spacing differences between the data-values; and updating the electronic signal based on the first value.

- 18. (Original) The machine-readable medium of claim 17, wherein the step of interpolating is based on a Lagrange technique.
- 19. (Original) The machine-readable medium of claim 18, wherein the datavalues are equally-spaced.
- 20. (Currently Amended) An apparatus for generating an electronic signal, comprising:

a determining means that determines an update phase-angle associated with the electronic signal;

a computing means that computes a first value of a <u>cyclic</u> function based on the update phase-angle, an interpolation using a first set of data-

values that generally describe the <u>cyclic</u> function <u>and have a spacing</u>

<u>expressed in terms of cycles</u>, and a second table and a second set of precalculated-values, wherein the pre-calculated values are based on spacing
differences between the data-values; and

a generating means that generates the electronic signal based on the first value.

- 21. (Original) The apparatus of claim 20, wherein the computing means uses a Lagrange interpolation technique.
- 22. (Original) The apparatus of claim 21, wherein the data-values are equally-spaced.